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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

| I hereby certify that this | TFICATE OF MAILING correspondence is being deposited with the |
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| an envelope addressed to | ice with sufficient postage as First Class Mail in Commissioner for Patents, P.O. Box 1450, |
| Alexandria, VA 22313-14 on 6.12.93 | 50 ango |
| Date | Signature |
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REVOCATION OF POWERS OF ATTORNEY AND APPOINTMENT OF NEW ATTORNEYS AND/OR AGENTS AND CHANGE OF CORRESPONDENCE ADDRESS

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

Massachusetts Institute of Technology, a corporation duly organized under the laws of the Commonwealth of Massachusetts, together with The Penn State Research Foundation, a corporation organized and existing under the laws of the State of Pennsylvania, are the assignees of the entire right, title and interest in the patent applications/patents identified in Attachment A. Massachusetts Institute of Technology and The Penn State Research Foundation hereby appoints Carolyn S. Elmore, Registration No. 37,567 and Anne I. Craig, Registration Number 32,976, and/or agents associated with:

Elmore Craig, P.C. 209 Main Street No. Chelmsford, Massachusetts 01863

to prosecute the identified applications/patents and any divisions or continuations thereof and to conduct all business in the United States Patent and Trademark Office. All previously granted Powers of Attorney are hereby revoked.

Statements under 37 C.F.R. §3.73(b) with Attachment A are submitted herewith.

All correspondence should be sent to Elmore Craig, P.C., 209 Main Street, No. Chelmsford, Massachusetts 01863. Please direct all telephone calls to Carolyn S. Elmore, Esq. at (978) 273-3298.

| Respectfully submitted, |
|--|
| Massachusetts Institute of Technology |
| By |
| Title: |
| Date |
| |
| |
| The Penn State Research Foundation |
| By: Ronald J. Huss |
| Title: Director Intellectual Property Office |
| Date: June 6, 2003 |

ATTACHMENT A

| | | | nach a a an |
|-------------------|---|--------------------------|--|
| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, and Robert S. Langer | Atty. Docket No | o.: 2846.1001-000 |
| Application No.: | 08/655,570 | Group: | 1615 |
| Filed: | May 24, 1996 | Examiner: | R. Bawa |
| Confirmation No.: | N/A | | |
| Title: | Porous Particles for Pulmonary Drug Delivery | | |
| Patent No.: | N/A | Granted: N/A | |
| Assignee: | Massachusetts Institute of Technology The Penn State Research Foundation | | |
| Recordation Date: | July 26, 1996 March 5, 1998 | Reel: 1. 9013 2. 8875 | Frames: 1. 0930-0934 2. 0876-0885 |

| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, Abdellaziz Ben-Jebria and Robert S. Langer | Atty. Docket No.: | : 2846.1001-001 |
|-------------------|---|--------------------------------|--------------------------------------|
| Application No.: | 09/194,068 | Group: | 1619 |
| Filed: | May 23, 1997 (Int'l Filing Date) April 8, 1999 (371(c) Date) | Examiner: | R. Bawa |
| Confirmation No.: | 2765 | | |
| Title: | Aerodynamically Light Particles for Pulmonary Drug Delivery | | |
| Patent No.: | 6,503,480 | Granted: January 7, 2003 | |
| Assignee: | Massachusetts Institute of Technology The Penn State Research Foundation | | |
| Recordation Date: | April 8, 1999 April 8, 1999 | Reel: 1. 9923 2. 9925 | Frames: 1. 0384-0392 2. 0098-0103 |
| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, Robert S. Langer and Abdellaziz Ben-Jebria | Atty. Docket No.:2846.1001-007 | |
| Application No.: | 09/569,153 | Group: | 1619 |
| Filed: | May 11, 2000 | Examiner: | R. Bawa |
| Confirmation No.: | N/A | | |
| Title: | Porous Particles for Deep | Lung Delivery (As | Amended) |
| Patent No.: | 6,254,854 | Granted: July 3, | 2001 |
| Assignee: | The Penn State Resear Massachusetts Institute | | |
| Recordation Date: | 1. October 30, 2000 2. July 26, 1996 | Reel: 1. 011211 2. 8875 | Frames: 1. 0319-0321 2. 0876-0875 |

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|-----------------------|--|---|--|
| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, Robert S. Langer and Abdellaziz Ben-Jebria | Atty. Docket No.: 2846.1001-008 | |
| Application No.: | 09/888,688 | Group: 1616 | |
| Filed: | June 25, 2001 | Examiner: R. Bawa | |
| Confirmation No.: | 2505 | · | |
| Title: | Porous Particles Compris Amended) | ing Excipients For Deep Lung Delivery (As | |
| Patent No.: | 6,436,443B2 | Granted: August 20, 2002 | |
| Assignee: | The Penn State Research Foundation Massachusetts Institute of Technology | | |
| Recordation Date: | 1. October 30, 2000 2. July 26, 1996 | Reel: 1. 011211 Frames: 1. 0319-0321 2. 8875 2. 0876-0875 | |
| | | | |
| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, Robert S. Langer and Abdellaziz Ben-Jebria | Atty. Docket No.: 2846.1001-009 | |
| Application No.: | 09/891,131 | Group: 1616 | |
| Filed: | June 25, 2001 | Examiner: Mina Haghighatian | |
| Confirmation No.: | 2511 | | |
| Title: | Spray Dried Porous Partic | cles For Deep Lung Delivery (As Amended) | |
| | | | |
| Patent No.: | 6,447,753 | Granted: September 10, 2002 | |
| Patent No.: Assignee: | 6,447,753 1. The Penn State Resear 2. Massachusetts Institute | ch Foundation | |

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| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, Robert S. Langer, and Abdellaziz Ben-Jebria | Atty. Docket No.: | 2846.1001-010 | | |
| Application No.: | 09/888,781 | Group: | 1616 | | |
| Filed: | June 25, 2001 | Examiner: | Mina Haghighatian | | |
| Confirmation No.: | 9010 | | | | |
| Title: | Amorphous Porous Partic | eles For Deep Lung | Delivery (As Amended) | | |
| Patent No.: | 6,447,752 | Granted: Septem | nber 10, 2002 | | |
| Assignee: | The Penn State Resear Massachusetts Institute | | | | |
| Recordation Date: | October 30, 2000 July 26, 1996 | Reel: 1. 011211 2. 8875 | Frames: 1. 0319-0321 2. 0876-0875 | | |
| A CARLON AND A CAR | | | | | |
| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, Abdellaziz Ben-Jebria and Robert S. Langer | Atty. Docket No.: | 2846.1001-028 | | |
| Application No.: | 10/090,418 | Group: | 1617 | | |
| Filed: | March 1, 2002 | Examiner: | n/a | | |
| Confirmation No.: | 8180 | | | | |
| Title: | Aerodynamically Light Pa | articles For Pulmon | ary Drug Delivery | | |
| Patent No.: | N/A | Granted: N/A | | | |
| Assignee: | The Penn State Research Massachusetts Institute | | | | |
| Recordation Date: | April 8, 1999 April 8, 1999 | Reel: 1. 9925 2. 9923 | Frame(s): 1. 0098-0102 2. 0384-0392 | | |

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| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, Robert S. Langer, and Abdellaziz Ben-Jebria | Atty. Docket No.: | 2846.1001-031 | |
| Application No.: | 10/209,654 | Group: | 1616 | |
| Filed: | July 30, 2002 | Examiner: | Not assigned | |
| Confirmation No.: | 5830 | · | | |
| Title: | Porous Particles Comprising Excipients For Deep Lung Delivery | | | |
| Patent No.: | N/A | Granted: N/A | | |
| Assignee: | Massachusetts Institute of Technology The Penn State Research Foundation | | | |
| Recordation Date: | 1. March 5, 1998 2. October 30, 2000 | Reel: 1. 9013 2. 011211 | Frames: 1. 0930-0934 2. 0319-0321 | |
| | | | | |
| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, | Atty. Docket No.: 2846.1002-000 | | |
| | Noah Lotan, Justin Hanes, Abdellaziz Ben-Jebria, and Robert S. Langer | | | |
| Application No.: | Noah Lotan, Justin Hanes, Abdellaziz Ben-Jebria, and Robert | Group: | 1615 | |
| Application No.: | Noah Lotan, Justin Hanes, Abdellaziz Ben-Jebria, and Robert S. Langer | Group: Examiner: | 1615 Raj Bawa | |
| | Noah Lotan, Justin Hanes, Abdellaziz Ben-Jebria, and Robert S. Langer | | | |
| Filed: | Noah Lotan, Justin Hanes, Abdellaziz Ben-Jebria, and Robert S. Langer 08/739,308 October 29, 1996 | Examiner: | Raj Bawa | |
| Filed: Confirmation No.: | Noah Lotan, Justin Hanes, Abdellaziz Ben-Jebria, and Robert S. Langer 08/739,308 October 29, 1996 N/A | Examiner: articles For Pulmon | Raj Bawa | |
| Filed: Confirmation No.: Title: | Noah Lotan, Justin Hanes, Abdellaziz Ben-Jebria, and Robert S. Langer 08/739,308 October 29, 1996 N/A Aerodynamically Light P | Examiner: articles For Pulmon Granted: Februar e of Technology | Raj Bawa nary Drug Delivery | |

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|--------------------------|--|-------------------------------------|--------------------------------------|
| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, Abdellaziz Ben-Jebria, and Robert S. Langer | Atty. Docket No | .: 2846.1002-001 |
| Application No.: | 09/211,940 | Group: | 1615 |
| Filed: | December 15, 1998 | Examiner: | S. Howard |
| Confirmation No.: | N/A | | |
| Title: | Aerodynamically Light Pa | rticles For Pulmon | ary Drug Delivery |
| Patent No.: | 6,136,295 | Granted: October 24, 2000 | |
| Assignee: | Massachusetts Institute The Penn State Research | | |
| Recordation Date: | January 17, 1997 January 17, 1997 | Reel: 1. 8388 2. 8388 | Frames: 1. 0959-0965 2. 0917-0918 |
| | Committee of the commit | | |
| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, Abdellaziz Ben-Jebria, and Robert s. Langer | Atty. Docket No.: 2846.1002-002 | |
| Application No.: | 09/562,988 | Group: | 1615 |
| Filed: | May 1, 2000 | Examiner: | S. Howard |
| | N/A | | |
| Confirmation No.: | N/A | | |
| Confirmation No.: Title: | N/A Aerodynamically Light Par | ticles For Pulmon | ary Drug Delivery |
| | | ticles For Pulmons Granted: June 4, | |
| Title: | Aerodynamically Light Par | Granted: June 4, | |

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| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, Abdellaziz Ben-Jebria, and Robert S. Langer | Atty. Docket No | o.: 2846.1002-003 |
| Application No.: | 90/006,092 | Group: | 1616 |
| Filed: | August 22, 2001 | Examiner: | Mina Haghighatian |
| Confirmation No.: | 7468 | | |
| Title: | Aerodynamically Light Particles For Pulmonary Drug Delivery | | |
| Patent No.: | 5,874,064C1 | Certificate Issued: December 10, 2002 | |
| Assignee: | Massachusetts Institute of Technology The Penn State Research Foundation | | |
| Recordation Date: | January 17, 1997 January 17, 1997 | Reel: 1. 8388 2. 8388 | Frames: 1. 0959-0965 2. 0917-0918 |
| | Kenaduran 1964 Sabatan Persana | | |
| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, Abdellaziz Ben-Jebria, | Atty. Docket No | o.: 2846.1002-004 |
| | and Robert S. Langer | | |
| Application No.: | , | Group: | 1616 |
| Application No.: | and Robert S. Langer | Group: Examiner: | 1616 Mina Haghighatian |
| | and Robert S. Langer 90/006,094 | | |
| Filed: | and Robert S. Langer 90/006,094 August 22, 2001 | Examiner: | Mina Haghighatian |
| Filed: Confirmation No.: | and Robert S. Langer 90/006,094 August 22, 2001 7466 | Examiner: | Mina Haghighatian |
| Filed: Confirmation No.: Title: | and Robert S. Langer 90/006,094 August 22, 2001 7466 Aerodynamically Light Part | Examiner: icles For Pulmons Granted: Octo | Mina Haghighatian ary Drug Delivery |

| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, Abdellazai Ben-Jebria, and Robert S. Langer | Atty. Docket No. | : 2846.1002-005 |
|-------------------|---|------------------------------|--------------------------------------|
| Application No.: | 10/027,212 | Group: | 1615 |
| Filed: | December 20, 2001 | Examiner: | Sharon Lee Howard |
| Confirmation No.: | 1760 | | |
| Title: | Aerodynamically Light Par | ticles For Pulmona | ry Drug Delivery |
| Patent No.: | N/A | Granted: N/A | |
| Assignee: | The Penn State Research Foundation Massachusetts Institute of Technology | | |
| Recordation Date: | August 29, 2000 August 29, 2000 | Reel: 1. 011098 2. 011098 | Frames: 1. 0746-0749 2. 0720-0724 |
| Applicants: | Justin Hanes, David A. Edwards, Carmen Evora, and Robert L. Langer | Atty. Docket No. | : 2846.1003-000 |
| Application No.: | 08/784,421 | Group: | 1615 |
| Filed: | January 16, 1997 | Examiner: | G. Kishore |
| Confirmation No.: | N/A | | ~ |
| Title: | Particles Incorporating Surf | factants For Pulmor | nary Drug Delivery |
| Patent No.: | 5,855,913 | Granted: Januar | ry 5, 1999 |
| Assignee: | Massachusetts Institute The Penn State Research | | |
| Recordation Date: | March 20, 1997 March 20, 1997 | Reel: 1. 8531 2. 8529 | Frames: 1. 0042-0046 2. 0138-0140 |

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|---|--|------------------------------|--------------------------------------|
| Applicants: | David A. Edwards, Robert S. Langer, Rita Vanbever, Jeffrey Mintzes, Jue Wang, and Donghao Chen | Atty. Docket No. | : 2846.1003-006 |
| Application No.: | 09/394,233 | Group: | 1616 |
| Filed: | September 13, 1999 | Examiner: | Mina Haghighatian |
| Confirmation No.: | 3922 | | |
| Title: | Preparation of Novel Part | icles For Inhalation | l . |
| Patent No.: | N/A | Granted: N/A | |
| Assignee: | Massachusetts Institute of Technology The Penn State Research Foundation | | |
| Recordation Date: | January 3, 2000 January 3, 2000 | Reel: 1. 010504 2. 010504 | Frames: 1. 0362-0367 2. 0329-0333 |
| | | | |
| Applicants: | Justin Hanes, David A. Edwards, Carmen Evora, and Robert S. Langer | Atty. Docket No. | : 2846.1003-007 |
| Application No.: | 09/351,341 | Group: | 1615 |
| Filed: | July 12, 1999 | Examiner: | G. Kishore |
| Confirmation No.: | N/A | | |
| Title: | Particles Incorporating Su | rfactants For Pulm | onary Drug Delivery |
| Patent No.: | RE37,053 E | Granted: Februa | ry 13, 2001 |
| Assignee: | Massachusetts Institute The Penn State Resear | • | |
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| Applicants: | David A. Edwards, Robert S. Langer, Rita Vanbever, Jeffrey Mintzes, Jue Wang and Donghao Chen | Atty. Docket No. | : 2846.1003-008 |
| Application No.: | 08/971,791 | Group: | 1616 |
| Filed: | November 17, 1997 | Examiner: | K. Shelborne |
| Confirmation No.: | N/A | • | |
| Title: | Preparation of Particles For | Inhalation | |
| Patent No.: | 5,985,309 | Granted: Nove | mber 16, 1999 |
| Assignee: | Massachusetts Institute of Technology The Penn State Research Foundation | | |
| Recordation Date: | December 22, 1997 December 22, 1997 | Reel: 1. 9108 2. 9108 | Frames: 1. 0667-0671 2. 0695-0702 |
| | | | |
| Applicants: | David A. Edwards, Robert S. Langer, Rita Vanbever, Jeffrey Mintzes, Jue Wang, and Donghao Chen | | |
| Application No.: | 09/752,106 | Group: | 1616 |
| Filed: | December 29, 2000 | Examiner: | Mina Haghighatian |
| Confirmation No.: | 8230 | | |
| Title: | Particles For Inhalation Having Sustained Release Properties | | |
| Patent No.: | N/A | Granted: N/A | |
| Assignee: | Massachusetts Institute of the Penn State Research | | |
| Recordation Date: | 1. August 13, 2001 | Reel: 1. 012078 | Frames: 1, 0137-0140 |

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|---|--|-------------------------------------|---|
| Applicants: | David A. Edwards, Robert S. Langer, Rita Vanbever, Jeffrey Mintzes, Jue Wang, and Donghao Chen | Atty. Docket No.: | 2846.1003-010 |
| Application No.: | 09/909,145 | Group: | 1619 |
| Filed: | July 19, 2001 | Examiner: | Not Assigned |
| Confirmation No.: | 7807 | | |
| Title: | Particles For Inhalation H | aving Sustained Re | elease Properties |
| Patent No.: | N/A | Granted: N/A | |
| Assignee: | Massachusetts Institute of Technology The Penn State Research Foundation | | |
| Recordation Date: | 1. January 3, 2000 2. January 3, 2000 | Reel: 1. 010504 2. 010504 | Frames: 1. 0362-0367 2. 0329-0333 |
| | | | 2. 002, 0000 |
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| Applicants: | Rita Vanbever, Jeffrey Mintzes, Jue Wang, Donghao Chen, Robert S. Langer, and David A. Edwards | Atty. Docket No.: | |
| | Rita Vanbever, Jeffrey Mintzes, Jue Wang, Donghao Chen, Robert S. Langer, and | | |
| Applicants: | Rita Vanbever, Jeffrey Mintzes, Jue Wang, Donghao Chen, Robert S. Langer, and David A. Edwards | Atty. Docket No.: | 2846.1003-011 |
| Applicants: Application No.: | Rita Vanbever, Jeffrey Mintzes, Jue Wang, Donghao Chen, Robert S. Langer, and David A. Edwards 60/059,004 | Atty. Docket No.: | 2846.1003-011 N/A |
| Applicants: Application No.: Filed: | Rita Vanbever, Jeffrey Mintzes, Jue Wang, Donghao Chen, Robert S. Langer, and David A. Edwards 60/059,004 September 15, 1997 | Atty. Docket No.: Group: Examiner: | 2846.1003-011 N/A |
| Applicants: Application No.: Filed: Confirmation No.: | Rita Vanbever, Jeffrey Mintzes, Jue Wang, Donghao Chen, Robert S. Langer, and David A. Edwards 60/059,004 September 15, 1997 N/A | Atty. Docket No.: Group: Examiner: | 2846.1003-011 N/A |
| Applicants: Application No.: Filed: Confirmation No.: Title: | Rita Vanbever, Jeffrey Mintzes, Jue Wang, Donghao Chen, Robert S. Langer, and David A. Edwards 60/059,004 September 15, 1997 N/A Preparation of Novel Part | Atty. Docket No.: Group: Examiner: | 2846.1003-011 N/A |
| Applicants: Application No.: Filed: Confirmation No.: Title: Patent No.: | Rita Vanbever, Jeffrey Mintzes, Jue Wang, Donghao Chen, Robert S. Langer, and David A. Edwards 60/059,004 September 15, 1997 N/A Preparation of Novel Part N/A | Atty. Docket No.: Group: Examiner: | 2846.1003-011 N/A |

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|-----------------------|--|--|--|
| Applicants: | David A. Edwards, Robert S. Langer, Rita Vanbever, Jeffrey Mintzes, Jue Wang, and Donghao Chen | Atty. Docket No.: 284 | 46.1003-012 |
| Application No.: | 09/006,091 | Group: 16 | 516 |
| Filed: | July 12, 1999 | Examiner: M | lina Haghighatian |
| Confirmation No.: | 7469 | | |
| Title: | Particles Incorporating Sur | factants For Pulmona | ry Drug Delivery |
| Patent No.: | RE37,053 | Granted: February 1 | 13, 2001 |
| Assignee: | Massachusetts Institute of Technology The Penn State Research Foundation | | |
| Recordation Date: | March 20, 1997 March 20, 1997 | Reel: 1. 8531 Frames: 1. 0042-0046 2. 8529 2. 0138-0140 | |
| | | | |
| Applicants: | David A. Edwards, Robert S. Langer, Rita Vanbever, Jeffrey Mintzes, Jue Wang, and Donghao Chen | Atty. Docket No.: 2 | 846.1003-013 |
| Application No.: | 90/006,093 | Group: | 1616 |
| Filed: | August 22, 2001 | Examiner: | Mina Haghighatian |
| Confirmation No.: | 7467 | | |
| Title: | Preparation Of Particles For Inhalation | | |
| | 1 | | |
| Patent No.: | 5,985,309 C1 | Granted: Decemb | er 31, 2002 |
| Patent No.: Assignee: | | of Technology | er 31, 2002 |

| Applicants: | Rita Vanbever, Robert S. Langer, David A. Edwards, Jeffrey Mintzes, Jue Wang, and Donghao Chen | Atty. Docket No.: | 2846.1003-014 |
|-------------------|--|------------------------------|--------------------------------------|
| Application No.: | 10/094,955 | Group: | 1616 |
| Filed: | March 7, 2002 | Examiner: | Mina Haghighatian |
| Confirmation No.: | 7624 | | |
| Title: | Particles For Inhalation Hav | ving Sustained Rele | ase Properties |
| Patent No.: | N/A | Granted: N/A | |
| Assignee: | The Penn State Research Foundation Massachusetts Institute of Technology | | |
| Recordation Date: | November 7, 2002 November 7, 2002 | Reel: 1. 013470 2. 013468 | Frames: 1. 0864-0867 2. 0360-0368 |
| Application No.: | 10/420,071 | Group: | Not assigned |
| Filed: | April 18, 2003 | Examiner: | Not assigned |
| Confirmation No.: | N/À | | |
| Title: | Particles for Inhalation Hav | ing Sustained Relea | se Properties |
| Patent No.: | N/A | Granted: N/A | |
| Assignee: | Massachusetts Institute o The Penn State Research | | |
| Recordation Date: | 1. August 13, 2001 2. August 13, 2001 | Reel: 1. 012078 2. 012078 | Frames: 1. 0156-0164 2. 0137-0140 |



STATEMENT UNDER 37 C.F.R. § 3.73(b)

| | The | Penn State Research Foundation, a corporation |
|-----------|-------------------------------|---|
| | | (Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.) |
| states th | at it is | |
| A. | [X] | the assignee, together with Massachusetts Institute of Technology, of the entire right, title and interest in the patent application(s)/patents identified in the attached Attachment A; or |
| B. | [] | an assignee together with [] of the entire right, title and interest in the patent application identified above. |
| The rigl | ht, title a | nd interest of the above-named assignee in the patent application identified above is established by virtue of: |
| A. [X] | An assi recorde attache | gnment from the inventor(s) of the patent application(s)/patents identified in Attachment A. The assignment wad in the Patent and Trademark Office at the Reel(s) and Frame(s) indicated in Attachment A, or a copy thereof id. |
| OR | | |
| B.[] | A chain | of title from the inventor(s) of the patent application identified above, to the current assignee as shown below: |
| | 1. | From: To: The document was recorded in the Patent and Trademark Office at Reel , Frame, or a copy thereof is attached. |
| | 2. | From: To: The document was recorded in the Patent and Trademark Office at Reel, or a copy thereof is attached. |
| | 3. | From: To: The document was recorded in the Patent and Trademark Office at Reel , Frame, or a copy thereof is attached. |
| | [] Ad | ditional documents in the chain of title are listed on a supplemental sheet. |
| The und | ersigned | (whose title is supplied below) is authorized to act on behalf of the assignee. |
| Date: | J ₁ | ine 6, 2003 |
| Name: | R | onald J. Huss |
| Title: | D: | irector, Intellectual Property Office |
| Signatur | re: | Edd J. Hus |

ATTACHMENT A

| | KI K MI TO ANK H TO | K. R. VARIAN | 上海上海、沙村水、水道、海州、湾、河 |
|-------------------|---|--------------------------|--------------------------------------|
| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, and Robert S. Langer | Atty. Docket No | o.: 2846.1001-000 |
| Application No.: | 08/655,570 | Group: | 1615 |
| Filed: | May 24, 1996 | Examiner: | R. Bawa |
| Confirmation No.: | N/A | | |
| Title: | Porous Particles for Pulmor | nary Drug Deliver | У |
| Patent No.: | N/A | Granted: N/A | |
| Assignee: | Massachusetts Institute of Technology The Penn State Research Foundation | | |
| Recordation Date: | 1. July 26, 1996 2. March 5, 1998 | Reel: 1. 9013 2. 8875 | Frames: 1. 0930-0934 2. 0876-0885 |

| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, Abdellaziz Ben-Jebria and Robert S. Langer | Atty. Docket No.: | 2846.1001-001 |
|-------------------|---|----------------------------|--------------------------------------|
| Application No.: | 09/194,068 | Group: | 1619 |
| Filed: | May 23, 1997 (Int'l Filing Date) April 8, 1999 (371(c) Date) | Examiner: | R. Bawa |
| Confirmation No.: | 2765 | | |
| Title: | Aerodynamically Light Pa | articles for Pulmona | ary Drug Delivery |
| Patent No.: | 6,503,480 | Granted: January | 7, 2003 |
| Assignee: | Massachusetts Institute The Penn State Resear | | |
| Recordation Date: | April 8, 1999 April 8, 1999 | Reel: 1. 9923 2. 9925 | Frames: 1. 0384-0392 2. 0098-0103 |
| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, Robert S. Langer and Abdellaziz Ben-Jebria | Atty. Docket No.: | 2846.1001-007 |
| Application No.: | 09/569,153 | Group: | 1619 |
| Filed: | May 11, 2000 | Examiner: | R. Bawa |
| Confirmation No.: | N/A | 1 | |
| Title: | Porous Particles for Deep | Lung Delivery (As | Amended) |
| Patent No.: | 6,254,854 | Granted: July 3, | 2001 |
| Assignee: | The Penn State Resear Massachusetts Institute | | |
| Recordation Date: | 1. October 30, 2000 2. July 26, 1996 | Reel: 1. 011211 2. 8875 | Frames: 1. 0319-0321 2. 0876-0875 |

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| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, Robert S. Langer and Abdellaziz Ben-Jebria | Atty. Docket No.: 2846.1001-008 | |
| Application No.: | 09/888,688 | Group: 1616 | |
| Filed: | June 25, 2001 | Examiner: R. Bawa | |
| Confirmation No.: | 2505 | | |
| Title: | Porous Particles Compris Amended) | ing Excipients For Deep Lung Delivery (As | |
| Patent No.: | 6,436,443B2 | Granted: August 20, 2002 | |
| Assignee: | The Penn State Research Foundation Massachusetts Institute of Technology | | |
| Recordation Date: | October 30, 2000 July 26, 1996 | Reel: 1. 011211 Frames: 1. 0319-0321 2. 8875 2. 0876-0875 | |
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| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, | Atty. Docket No.: 2846.1001-009 | |
| | Robert S. Langer and Abdellaziz Ben-Jebria | | |
| Application No. | Robert S. Langer and | Group: 1616 | |
| Application No. | Robert S. Langer and Abdellaziz Ben-Jebria | Group: 1616 Examiner: Mina Haghighatian | |
| | Robert S. Langer and Abdellaziz Ben-Jebria | • | |
| Filed: | Robert S. Langer and Abdellaziz Ben-Jebria 09/891,131 June 25, 2001 2511 | • | |
| Filed: Confirmation No.: | Robert S. Langer and Abdellaziz Ben-Jebria 09/891,131 June 25, 2001 2511 | Examiner: Mina Haghighatian | |
| Filed: Confirmation No.: Title: | Robert S. Langer and Abdellaziz Ben-Jebria 09/891,131 June 25, 2001 2511 Spray Dried Porous Partic | Examiner: Mina Haghighatian les For Deep Lung Delivery (As Amended) Granted: September 10, 2002 ch Foundation | |

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| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, Robert S. Langer, and Abdellaziz Ben-Jebria | Atty. Docket No.: | 2846.1001-010 | |
| Application No.: | 09/888,781 | Group: | 1616 | |
| Filed: | June 25, 2001 | Examiner: | Mina Haghighatian | |
| Confirmation No.: | 9010 | | | |
| Title: | Amorphous Porous Partic | eles For Deep Lung | Delivery (As Amended) | |
| Patent No.: | 6,447,752 | Granted: Septer | nber 10, 2002 | |
| Assignee: | The Penn State Resear Massachusetts Institute | | | |
| Recordation Date: | October 30, 2000 July 26, 1996 | Reel: 1. 011211 2. 8875 | Frames: 1. 0319-0321 2. 0876-0875 | |
| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, Abdellaziz Ben-Jebria and Robert S. Langer | Atty. Docket No.: | 2846.1001-028 | |
| Application No.: | 10/090,418 | Group: | 1617 | |
| Filed: | March 1, 2002 | Examiner: | n/a | |
| Confirmation No.: | 8180 | | | |
| Title: | Aerodynamically Light Pa | articles For Pulmon | ary Drug Delivery | |
| Patent No.: | N/A | Granted: N/A | | |
| Assignee: | The Penn State Research Massachusetts Institute | | | |
| Recordation Date: | 1. April 8, 1999 2. April 8, 1999 | Reel: 1. 9925 2. 9923 | Frame(s): 1. 0098-0102 2. 0384-0392 | |

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| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, Robert S. Langer, and Abdellaziz Ben-Jebria | Atty. Docket No.: | 2846.1001-031 |
| Application No.: | 10/209,654 | Group: | 1616 |
| Filed: | July 30, 2002 | Examiner: | Not assigned |
| Confirmation No.: | 5830 | | |
| Title: | Porous Particles Compri | sing Excipients For | Deep Lung Delivery |
| Patent No.: | N/A | Granted: N/A | |
| Assignee: | Massachusetts Institut The Penn State Resea | | |
| Recordation Date: | 1. March 5, 1998 2. October 30, 2000 | Reel: 1. 9013 2. 011211 | Frames: 1. 0930-0934 2. 0319-0321 |
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| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, Abdellaziz Ben-Jebria, and Robert S. Langer | Atty. Docket No.: | 2846.1002-000 |
| Application No.: | 08/739,308 | Group: | 1615 |
| Filed: | October 29, 1996 | Examiner: | Raj Bawa |
| Confirmation No.: | N/A | | |
| Title: | Aerodynamically Light P | articles For Pulmon | ary Drug Delivery |
| Patent No.: | 5,874,064 | Granted: Februar | ry 23, 1999 |
| Assignee: | Massachusetts Institut The Penn State Research | | |
| Recordation Date: | January 17, 1997 January 17, 1997 | Reel: 1. 8388 2. 8388 | Frames: 1. 0959-0965 2. 0917-0918 |

| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, Abdellaziz Ben-Jebria, and Robert S. Langer | Atty. Docket No. | .: 2846.1002-001 | |
|-------------------|---|---|--------------------------------------|--|
| Application No.: | 09/211,940 | Group: | 1615 | |
| Filed: | December 15, 1998 | Examiner: | S. Howard | |
| Confirmation No.: | N/A | | | |
| Title: | Aerodynamically Light Par | rticles For Pulmon | ary Drug Delivery | |
| Patent No.: | 6,136,295 | Granted: Octob | per 24, 2000 | |
| Assignee: | | Massachusetts Institute of Technology The Penn State Research Foundation | | |
| Recordation Date: | January 17, 1997 January 17, 1997 | Reel: 1. 8388 2. 8388 | Frames: 1. 0959-0965 2. 0917-0918 | |
| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, Abdellaziz Ben-Jebria, and Robert s. Langer | Atty. Docket No. | : 2846.1002-002 | |
| Application No.: | 09/562,988 | Group: | 1615 | |
| Filed: | May 1, 2000 | Examiner: | S. Howard | |
| Confirmation No.: | N/A | | | |
| Title: | Aerodynamically Light Par | ticles For Pulmona | ary Drug Delivery | |
| Patent No.: | 6,399,102 | Granted: June 4, | 2002 | |
| Assignee: | The Penn State Researc Massachusetts Institute | search Foundation | | |
| Recordation Date: | 1. August 29, 2000 2. August 29, 2000 | Reel: 1. 011098 2. 011098 | Frames: 1. 0746-0749 2. 0720-0724 | |

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| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, Abdellaziz Ben-Jebria, and Robert S. Langer | Atty. Docket No | o.: 2846.1002-003 | |
| Application No.: | 90/006,092 | Group: | 1616 | |
| Filed: | August 22, 2001 | Examiner: | Mina Haghighatian | |
| Confirmation No.: | 7468 | | | |
| Title: | Aerodynamically Light Part | ticles For Pulmon | ary Drug Delivery | |
| Patent No.: | 5,874,064C1 | Certificate Issue | ed: December 10, 2002 | |
| Assignee: | Massachusetts Institute of Technology The Penn State Research Foundation | | | |
| Recordation Date: | 1. January 17, 1997 2. January 17, 1997 | Reel: 1. 8388 2. 8388 | Frames: 1. 0959-0965 2. 0917-0918 | |
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| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, Abdellaziz Ben-Jebria, and Robert S. Langer | Atty. Docket No | o.: 2846.1002-004 | |
| Application No.: | 90/006,094 | Group: | 1616 | |
| Filed: | August 22, 2001 | Examiner: | Mina Haghighatian | |
| Confirmation No.: | 7466 | | | |
| Title: | Aerodynamically Light Part | icles For Pulmon | ary Drug Delivery | |
| Patent No.: | 6,136,295C1 | Granted: Octo | ber 29, 2002 | |
| Assignee: | | Massachusetts Institute of Technology The Penn State Research Foundation | | |
| Recordation Date: | 1. January 17, 1997 2. January 17, 1997 | Reel: 1. 8388 2. 8388 | Frames: 1. 0959-0965 2. 0917-0918 | |

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|-------------------|---|------------------------------|--------------------------------------|
| Applicants: | David A. Edwards, Giovanni Caponetti, Jeffrey S. Hrkach, Noah Lotan, Justin Hanes, Abdellazai Ben-Jebria, and Robert S. Langer | Atty. Docket No. | : 2846.1002-005 |
| Application No.: | 10/027,212 | Group: | 1615 |
| Filed: | December 20, 2001 | Examiner: | Sharon Lee Howard |
| Confirmation No.: | 1760 | | |
| Title: | Aerodynamically Light Part | ticles For Pulmona | ry Drug Delivery |
| Patent No.: | N/A | Granted: N/A | |
| Assignee: | The Penn State Research Foundation Massachusetts Institute of Technology | | |
| Recordation Date: | August 29, 2000 August 29, 2000 | Reel: 1. 011098 2. 011098 | Frames: 1. 0746-0749 2. 0720-0724 |
| Applicants: | Justin Hanes, David A. Edwards, Carmen Evora, and Robert L. Langer | Atty. Docket No. | : 2846.1003-000 |
| Application No.: | 08/784,421 | Group: | 1615 |
| Filed: | January 16, 1997 | Examiner: | G. Kishore |
| Confirmation No.: | N/A | | |
| Title: | Particles Incorporating Surf | actants For Pulmon | nary Drug Delivery |
| Patent No.: | 5,855,913 | Granted: Januar | ry 5, 1999 |
| Assignee: | Massachusetts Institute of 2. The Penn State Research | ų. | - |
| Recordation Date: | March 20, 1997 March 20, 1997 | Reel: 1. 8531 2. 8529 | Frames: 1. 0042-0046 2. 0138-0140 |

| Applicants: | David A. Edwards, Robert S. Langer, Rita Vanbever, Jeffrey Mintzes, Jue Wang, and Donghao Chen | Atty. Docket No.: | 2846.1003-006 |
|---------------------------------|--|--|--|
| Application No.: | 09/394,233 | Group: | 1616 |
| Filed: | September 13, 1999 | Examiner: | Mina Haghighatian |
| Confirmation No.: | 3922 | | |
| Title: | Preparation of Novel Particles For Inhalation | | |
| Patent No.: | N/A | Granted: N/A | |
| Assignee: | Massachusetts Institute of Technology The Penn State Research Foundation | | |
| Recordation Date: | 1. January 3, 2000 2. January 3, 2000 | Reel: 1. 010504 2. 010504 | Frames: 1. 0362-0367 2. 0329-0333 |
| Applicants: | Justin Hanes, David A. Edwards, Carmen Evora, and Robert S. | Atty. Docket No.: | Control of the second of the s |
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| | Langer | | 1/15 |
| Application No.: | D9/351,341 | Group: | 1615 |
| Application No.: | | Group: Examiner: | 1615 G. Kishore |
| | 09/351,341 | | |
| Filed: | 09/351,341 July 12, 1999 | Examiner: | G. Kishore |
| Filed: Confirmation No.: | 09/351,341 July 12, 1999 N/A | Examiner: | G. Kishore |
| Filed: Confirmation No.: Title: | 09/351,341 July 12, 1999 N/A Particles Incorporating Su | Examiner: urfactants For Pulmo Granted: Februar e of Technology | G. Kishore |

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| Applicants: | David A. Edwards, Robert S. Langer, Rita Vanbever, Jeffrey Mintzes, Jue Wang and Donghao Chen | Atty. Docket No. | . 2840.1003-008 |
| Application No.: | 08/971,791 | Group: | 1616 |
| Filed: | November 17, 1997 | Examiner: | K. Shelborne |
| Confirmation No.: | N/A | | |
| Title: | Preparation of Particles For Inhalation | | |
| Patent No.: | 5,985,309 | Granted: Nove | mber 16, 1999 |
| Assignee: | Massachusetts Institute of Technology The Penn State Research Foundation | | |
| Recordation Date: | December 22, 1997 December 22, 1997 | Reel: 1. 9108 2. 9108 | Frames: 1. 0667-0671 2. 0695-0702 |
| | (190 6 -900) | | |
| Applicants: | David A. Edwards, Robert S. Langer, Rita Vanbever, Jeffrey Mintzes, Jue Wang, and Donghao Chen | Atty. Docket No. | : 2846.1003-009 |
| Application No.: | 09/752,106 | Group: | 1616 |
| Filed: | December 29, 2000 | Examiner: | Mina Haghighatian |
| Confirmation No.: | 8230 | | |
| Title: | Particles For Inhalation Having Sustained Release Properties | | |
| Patent No.: | N/A | Granted: N/A | |
| Assignee: | Massachusetts Institute of Technology The Penn State Research Foundation | | |
| Recordation Date: | 1. August 13, 2001 2. August 13, 2001 | Reel: 1. 012078 2. 012078 | Frames: 1. 0137-0140 2. 0156-0164 |

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| Applicants: | David A. Edwards, Robert S. Langer, Rita Vanbever, Jeffrey Mintzes, Jue Wang, and Donghao Chen | Atty. Docket No. | : 2846.1003-010 |
| Application No.: | 09/909,145 | Group: | 1619 |
| Filed: | July 19, 2001 | Examiner: | Not Assigned |
| Confirmation No.: | 7807 | | |
| Title: | Particles For Inhalation Having Sustained Release Properties | | |
| Patent No.: | N/A | Granted: N/A | |
| Assignee: | Massachusetts Institute of Technology The Penn State Research Foundation | | |
| Recordation Date: | 1. January 3, 2000 2. January 3, 2000 | Reel: 1. 010504 Frames: 1. 0362-0367 2. 010504 2. 0329-0333 | |
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| Applicants: | Rita Vanbever, Jeffrey Mintzes, Jue Wang, Donghao Chen, Robert S. Langer, and David A. Edwards | Atty. Docket No.: | 2846.1003-011 |
| Applicants: Application No.: | Jeffrey Mintzes, Jue Wang, Donghao Chen, Robert S. Langer, and | Atty. Docket No.: | N/A |
| | Jeffrey Mintzes, Jue Wang, Donghao Chen, Robert S. Langer, and David A. Edwards | | |
| Application No.: | Jeffrey Mintzes, Jue Wang, Donghao Chen, Robert S. Langer, and David A. Edwards 60/059,004 | Group: | N/A |
| Application No.: Filed: | Jeffrey Mintzes, Jue Wang, Donghao Chen, Robert S. Langer, and David A. Edwards 60/059,004 September 15, 1997 | Group: Examiner: | N/A |
| Application No.: Filed: Confirmation No.: | Jeffrey Mintzes, Jue Wang, Donghao Chen, Robert S. Langer, and David A. Edwards 60/059,004 September 15, 1997 N/A | Group: Examiner: | N/A |
| Application No.: Filed: Confirmation No.: Title: | Jeffrey Mintzes, Jue Wang, Donghao Chen, Robert S. Langer, and David A. Edwards 60/059,004 September 15, 1997 N/A Preparation of Novel Part | Group: Examiner: icles for Inhalation | N/A |

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|------------------------------|---|----------------------------|--------------------------------------|--|
| Applicants: | David A. Edwards, Robert S. Langer, Rita Vanbever, Jeffrey Mintzes, Jue Wang, and Donghao Chen | Atty. Docket No. | : 2846.1003-012 | |
| Application No.: | 09/006,091 | Group: | 1616 | |
| Filed: | July 12, 1999 | Examiner: | Mina Haghighatian | |
| Confirmation No.: | 7469 | | · | |
| Title: | Particles Incorporating Surfactants For Pulmonary Drug Delivery | | | |
| Patent No.: | RE37,053 | Granted: February 13, 2001 | | |
| Assignee: | Massachusetts Institute of Technology The Penn State Research Foundation | | | |
| Recordation Date: | 1. March 20, 1997 2. March 20, 1997 | Reel: 1. 8531 2. 8529 | Frames: 1. 0042-0046 2. 0138-0140 | |
| Mark & Land | State Committee | | | |
| Applicants: | David A. Edwards, Rober S. Langer, Rita Vanbever, Jeffrey Mintzes, Jue Wang, and Donghao Cher | | o.: 2846.1003-013 | |
| Application No.: | 90/006,093 | Group: | 1616 | |
| Filed: | August 22, 2001 | Examiner: | Mina Haghighatian | |
| Confirmation No.: | 7467 | | | |
| Title: | Preparation Of Particles For Inhalation | | | |
| Patent No.: | 5,985,309 C1 | Granted: Dec | ember 31, 2002 | |
| Assignee: | Massachusetts Institute of Technology The Penn State Research Foundation | | | |
| Recordation Date: | 1. December 22, 1997 2. December 22, 1997 | Reel: 1. 9108 2. 9108 | Frames: 1. 0667-0671 2. 0695-0702 | |

| Applicants: | Rita Vanbever, Robert S. Langer, David A. Edwards, Jeffrey Mintzes, Jue Wang, and Donghao Chen | Atty. Docket No.: | 2846.1003-014 |
|-------------------|--|------------------------------|--------------------------------------|
| Application No.: | 10/094,955 | Group: | 1616 |
| Filed: | March 7, 2002 | Examiner: | Mina Haghighatian |
| Confirmation No.: | 7624 | | |
| Title: | Particles For Inhalation Having Sustained Release Properties | | |
| Patent No.: | N/A | Granted: N/A | |
| Assignee: | The Penn State Research Foundation Massachusetts Institute of Technology | | |
| Recordation Date: | 1. November 7, 2002 2. November 7, 2002 | Reel: 1. 013470 2. 013468 | Frames: 1. 0864-0867 2. 0360-0368 |
| Application No.: | 10/420,071 | Group: | Not assigned |
| Filed: | April 18, 2003 | Examiner: | Not assigned |
| Confirmation No.: | N/A | | |
| Title: | Particles for Inhalation Having Sustained Release Properties | | |
| Patent No.: | N/A | Granted: N/A | |
| Assignee: | Massachusetts Institute of Technology The Penn State Research Foundation | | |
| Recordation Date: | 1. August 13, 2001 2. August 13, 2001 | Reel: 1. 012078 2. 012078 | Frames: 1. 0156-0164 2. 0137-0140 |